

# Ensuring Illinois' Global Success

Shrinking our “skills gap” through wise investments in children’s learning and development



## ■ WHO WE ARE

READYNATION is the nation's preeminent business leader organization, working to strengthen business through effective policies for children and youth. It operates under the umbrella of the non-profit Council For A Strong America. Our more than 1,100 members, including more than 100 in Illinois, educate policymakers and the public about effective investments that will help businesses compete in today's global marketplace by helping children get on the right track to succeed in school and in life. Our members have contributed to victories for children at the federal level and in dozens of states.

### Acknowledgements

This report was authored by Sandra Bishop-Josef, Ph.D., Sean Noble, and Sara Watson, Ph.D.

The following individuals also contributed to this report: Tim Carpenter, William Christeson, Tom Garrett, Stefanie Campolo, Miriam Rollin, and David Kass.

### Our Funding

READYNATION *ILLINOIS* is supported by tax-deductible contributions from foundations, individuals, and corporations. READYNATION *ILLINOIS* accepts no funds from federal, state, or local governments.

Major funding for READYNATION is provided by: Alliance for Early Success • Betterment Fund • The Bingham Program • The Frances Hollis Brain Foundation • The California Education Policy Fund • The Annie E. Casey Foundation • Robert Sterling Clark Foundation • The Sam L. Cohen Foundation • Robert H. Dugger • Early Childhood Funders Collaborative • Max M. and Marjorie S. Fisher Foundation • The Ford Foundation • Bill & Melinda Gates Foundation • The George Gund Foundation • Hagedorn Foundation • Irving Harris Foundation • The Heising-Simons Foundation • The William and Flora Hewlett Foundation • The James Irvine Foundation • Robert Wood Johnson Foundation • W.K. Kellogg Foundation • The Kresge Foundation • The Oscar G. and Elsa S. Mayer Foundation • McCormick Foundation • The Meadows Foundation • The David and Lucile Packard Foundation • The J.B. and M.K. Pritzker Family Foundation • Raise Your Hands Texas • Rauch Foundation • Texas Education Grantmakers Advocacy Consortium Fund • Bernard van Leer Foundation • Dennis and Phyllis Washington Foundation.

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## ■ EXECUTIVE SUMMARY

If current education and labor market trends continue, Illinois will face a serious skills gap. Illinois is midway through a decade in which 69 percent of the 2.3 million job openings in the state will require postsecondary education. But only 62 percent of Illinoisans have this level of education, leaving a 7 percent gap. **This gap translates into more than 150,000 open positions for which we won’t have qualified applicants, thus leaving business teams disrupted and making Illinois less competitive.**

The skills deficiencies go beyond those related to specific occupations. Illinois businesses are also concerned about the lack of increasingly important “soft skills”—communication, collaboration, and critical thinking—required for virtually any occupation in today’s world. Nationally, three out of four executives believe that these skills will become even more important because of global competition and the pace of change in the business environment.

A pipeline of skilled workers will be hard to create when 17 percent of Illinois high school students fail to graduate on time, and fewer than half of our public school students meet college-readiness benchmarks on the ACT. The results will be costly for students, businesses, and our entire state – reflecting the price tags for remedial education, lowered lifetime earnings, and poorer tax receipts.

**To reverse Illinois’ skills-gap troubles, ReadyNation urges greater, research-proven investments in supports for young children’s learning and development, as well as college- and career-readiness programs geared toward older students.**

**The bottom line:** The future of Illinois’ economy depends upon the caliber of our workforce. If we expect to compete and succeed in the global marketplace, we must act now to ensure our businesses have the skilled workforce we need.



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## UNPREPARED STUDENTS, UNPREPARED WORKFORCE

Although businesses have always needed workers proficient in the “3 Rs” – reading, writing, and arithmetic – today’s fast-paced, international marketplace requires even higher proficiency levels of these basic skills. But they are too often lacking, especially among those entering the workforce.

- According to the “Nation’s Report Card”—the National Assessment of Educational Progress—only 36 percent of Illinois 8<sup>th</sup> graders are proficient in reading, only 36 percent are proficient in math, and only 26 percent are proficient in science.<sup>1</sup>
- 17 percent of Illinois high school freshmen fail to graduate within four years.<sup>2</sup>
- In 2014, virtually all public high school juniors in Illinois took the ACT test. Yet only 46 percent of them achieved a “college-ready” composite score.<sup>3</sup> The actual number of Illinois high school students ready for college could be even lower: Only 38 percent met the ACT college-



readiness benchmarks in at least three of the four subjects tested—English, reading, mathematics, and science. ACT research shows that students meeting three or four of the benchmarks have a strong likelihood of being successful in college.<sup>4</sup>

In addition to basic competencies, employers are increasingly concerned about a lack of communication, collaboration, and critical thinking skills. In a survey of 2,000 executives conducted by the American Management Association, three out of four executives believe that these skills will become even more important because of global competition and the pace of change in the business environment.<sup>5</sup> In that same survey, nine out of 10 executives say such “soft skills” are important to support business expansion, but fewer than half of those executives rated their employees as above average in those skills.<sup>6</sup>



**“In hiring, I’m looking for job applicants who can think creatively, plan ahead, and work well in teams. Those are the kind of ‘soft skills’ that begin to take shape early in kids’ lives, the same skills that early childhood**

**programs can help develop among the engineers and inventors of tomorrow.”**

– Keith Krutz, President, IMS Buhrke-Olson,  
Arlington Heights

## ILLINOIS' GROWING SKILLS GAP

With education outcomes that need improvement and jobs that place an increasing emphasis on a variety of skills, how will the Illinois workforce of the future fare?

## RISING EDUCATION REQUIREMENTS

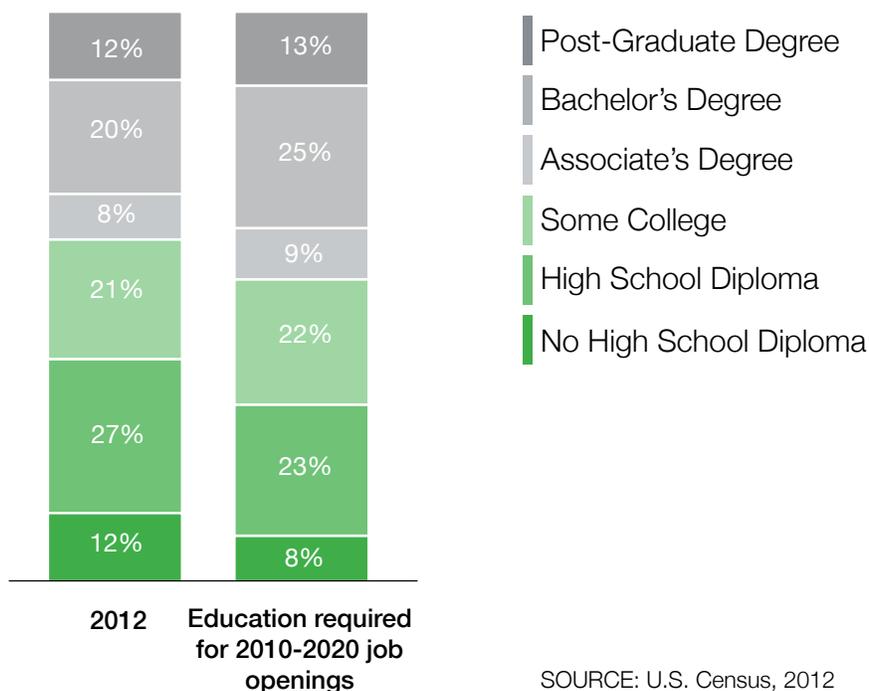
If current education and labor market trends continue, Illinois will face a serious skills gap. The anticipated growth rates for occupations in Illinois are skewed towards jobs that are either considered “highly-skilled” (needing a bachelor’s degree or higher), or “middle-skilled” (requiring more than a high school diploma but less than a four-year degree).<sup>7</sup> Consider these projections for Illinois:

- Our state is midway through a decade, 2010-2020, in which there will be 2.3 million total job vacancies as a result of new jobs and openings from retirements and career switches.<sup>8</sup> Among these will be more

than twice as many job openings requiring postsecondary education (1.58 million), compared with openings for those with a high school education or less (716,000).<sup>9</sup>

- Of the 2.3 million job openings in Illinois in the current decade, 69 percent will require some level of postsecondary education — but only 62 percent of Illinoisans have this level of education, leaving a 7 percent gap. Applying that gap to the 2.3 million job openings leaves 160,720 positions for which there won’t be qualified applicants. Or, to be conservative, more than 150,000 job openings during that period will not be filled with qualified individuals, thus leaving business teams disrupted and making Illinois less competitive.
- While 12 percent of Illinoisans (ages 25+) lack a high school diploma or equivalent, only 8 percent of 2010-2020 job vacancies will be available for those without a diploma.<sup>10</sup>

### Educational Attainment in Illinois: Current vs. Needed for Job Openings



SOURCE: U.S. Census, 2012

- Middle-skill jobs account for 54 percent of Illinois' current labor market, but only 43 percent of the state's workers are trained to the middle-skill level.<sup>11</sup>
- By 2020, 70 percent of all Illinois jobs will require some postsecondary education.<sup>12</sup>

## FOCUS ON SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH (STEM)

Jobs that are heavily reliant on technology are growing. The number of STEM jobs in Illinois is expected to grow by 16 percent in the current decade (2010-2020).<sup>13</sup> Workers often need postsecondary education to capitalize on these types of jobs. In fact, 94 percent of Illinois STEM job openings will require some level of postsecondary education and 74 percent will require a bachelor's degree or higher.<sup>14</sup>

Health care support jobs are among those growing the most in Illinois, with 32 percent growth expected this decade compared with 17 percent growth in other jobs. But a mere 37 percent of health care jobs in 2020 will be available to those with only a high school diploma or less; 63 percent will require some postsecondary education.<sup>15</sup>



**“The health care sector is seeing some of the greatest growth in Illinois, with thousands of new jobs requiring a solid education and training. High-quality preschool, STEM learning, and**

**Career and Technical Ed all help position students for the jobs of the future.”**

– JoEllen Randall, Vice President for Human Resources, Blessing Health System, Quincy

## HIGH COST OF THE SKILLS GAP

The lack of a skilled workforce comes at a high cost for individuals, businesses, and the economy.

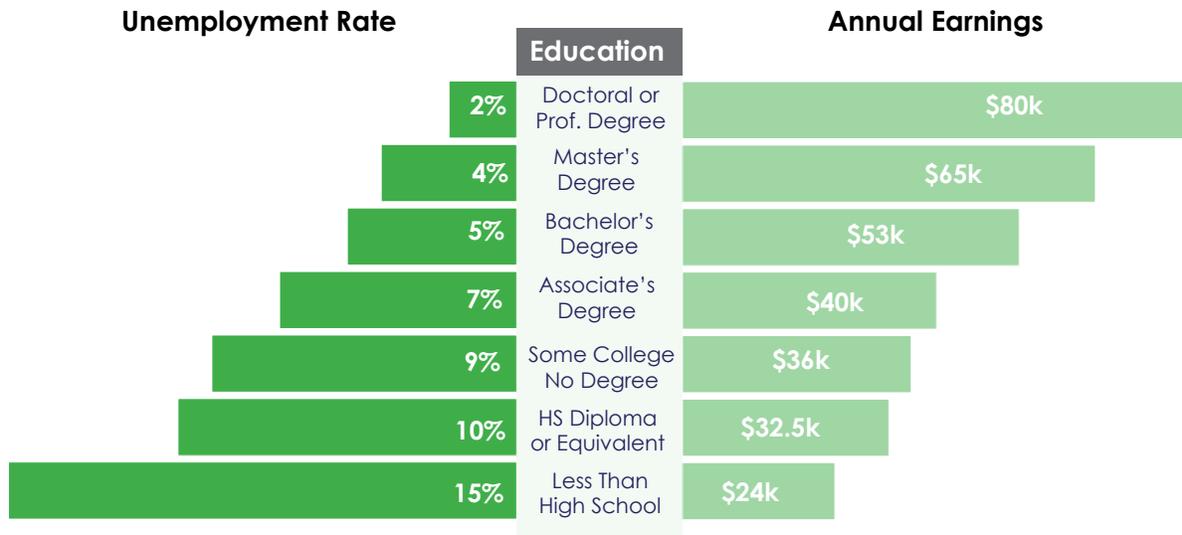
The unemployment rate for Illinois workers with only a high school diploma (10 percent) is twice as high as that for workers with a bachelor's degree (5 percent).<sup>16</sup> The wage gains from even some postsecondary training are clear, as well: workers with an associate's degree earn about \$7,500 more per year than a high school graduate and \$16,000 more per year than a high school dropout.<sup>17</sup>

Graduating even an additional 1,000 of Illinois' high school dropouts could result in impressive economic benefits. These 1,000 extra graduates would likely:

- collectively earn \$11 million more in an average year than they would without a diploma;
- support 95 new jobs in the state;
- increase the gross state product by \$16 million; and
- increase state/local tax revenues by \$1.1 million annually.<sup>18</sup>

Remedial courses and training to help students catch up and get on track for higher education and training are helpful, but they are expensive and inefficient. Half of all students entering public, two-year colleges in Illinois require remediation.<sup>19</sup> Remedial education costs students and the state an estimated \$86 million annually, and up to \$155 million annually after factoring in the reduced lifetime wages of students taking remedial courses.<sup>20</sup>

## Unemployment and Earnings by Education Level in the State of Illinois



Source: Illinois Department of Economic Security  
[www.ides.illinois.gov/IDES%20Forms%20and%20Publications/LearnMoreEarnMore](http://www.ides.illinois.gov/IDES%20Forms%20and%20Publications/LearnMoreEarnMore)

### CLOSING THE SKILLS GAP THROUGH WISE POLICY APPROACHES

As Illinois and our entire nation wrestle with how best to shrink the gap between workforce needs and qualified job candidates, we can take heart in this: we don't have to start from scratch. There are a number of highly effective policies and programs that can aid us in ensuring children grow up better-prepared for college, training, and careers. Many of these approaches are already in place to one degree or another in Illinois, and represent a solid foundation on which we can build further by broadening children's access to them and continually improving their quality.

### HIGH-QUALITY EARLY CARE AND EDUCATION PROGRAMS

High-quality early care and education programs, including preschool, childcare, and home visiting, help children prepare for success in school and later life, including the workforce. These voluntary programs target their efforts on kids' earliest years of life, when rapid brain development is occurring –

synapses forming and neural pathways taking shape in ways that will support a lifetime of learning. Research demonstrates that focusing greater supports during this period of children's development carries an enormous return on investment – while neglecting it incurs heavy costs.

Research shows that children who participate in high-quality early care and education programs can do better on a range of outcomes.

**“Unemployment is lower and pay is higher among workers who've pursued extra education, according to U.S. Department of Labor statistics. Even an associate's degree can boost annual earnings by about 20 percent more than the income of someone who's only graduated high school, and 67 percent more than a high school dropout.”**



– John Quigley, President & CEO,  
 Elmhurst Chamber of Commerce & Industry



**“Developing literacy, math, and science skills can’t wait until kids reach middle or high school. If our aim is to shape a highly qualified, globally competitive workforce, research demonstrates we need to begin nurturing children’s learning and imagination long before they even reach kindergarten.”**

– Rudy Valdez, Vice President,  
Southwest Ideas for Today and Tomorrow (SWIFTT)

Some examples of this early learning research:

- **Less likely to be abused or neglected** – The Chicago Child-Parent Centers (CPC) preschool and the Nurse-Family Partnership (NFP) home-visiting program both cut child abuse and neglect in half;<sup>21</sup>
- **Healthier** – In Cincinnati, the mortality rate for infants receiving either Healthy Families America (HFA) or NFP home-visiting programs was 60 percent lower than for the comparison group.<sup>22</sup> A study in Chicago demonstrated that working with preschool-aged children and their

parents can reduce weight gain: children not in the program gained 16 percent more weight over the next two years than participants;<sup>23</sup>

- **Better prepared to succeed in elementary school** – New Jersey’s preschool program serving disadvantaged school districts statewide reported that children in the program were three-fourths of a year ahead in math and

two-thirds of a year ahead in literacy in 4<sup>th</sup> and 5<sup>th</sup> grades.<sup>24</sup> In studies in Memphis and Denver, the most high-risk mothers served by NFP had children with better grade point averages and test scores in reading and math throughout elementary school, compared with children of similar mothers who did not receive NFP;<sup>25</sup>

- **Less special education** – Pennsylvania’s Pre-K Counts program cut – to 4 percent, from 22 percent – the portion of children at risk for problematic social and self-control behavior (such as taking things from others or not waiting one’s turn).<sup>26</sup> This is a positive sign that fewer of those children will need special education. An HFA home-visiting program in New York helped reduce the number of children who needed special education;<sup>27</sup>
- **Lower rates of retention in school** – Children served in Tennessee’s preschool program were half as likely to be held back in kindergarten than their peers;<sup>28</sup>
- **Higher rates of high school graduation** – Children attending Chicago CPC preschool were 29 percent more likely to graduate from high school than non-participants, and Michigan’s Great Start Readiness state preschool program reported a 35 percent increase in graduates;<sup>29</sup>
- **Higher rates of college graduation** – By age 30, Abecedarian preschool project participants were four times more likely to have earned a 4-year college degree than those not in the program;<sup>30</sup>
- **Less crime** – Children not served by CPC were 70 percent more likely to be arrested by age 18 than program participants, while those not served by the Perry Preschool Project were five times more likely to be chronic offenders.<sup>31</sup> By age 19, children who did not participate in NFP had more than twice as many criminal convictions as those who participated;<sup>32</sup> and



**“Not only do investments in early learning pay-off significantly over the life of a child, they can have a nearly immediate, ‘multiplier’ effect on local economies – spurring about \$2 of business activity for every \$1 invested.”**

– Joseph Higgs, President,  
Bank of Farmington

- **Higher rates of employment** – By age 30, individuals served by the Abecedarian preschool program were 42 percent more likely to be consistently employed.<sup>33</sup>

Studies of high-quality early education programs for at-risk children have shown that these programs can save society much more than they cost. A well-respected, independent cost-benefit analysis of more than 20 different studies of pre-kindergarten programs showed that preK can return, on average, a “profit” (economic benefits minus costs) to society of over \$26,000 for every child served.<sup>34</sup> A financial analysis of the NFP home-visiting program produced a benefit-cost ratio of almost three to one, with an average net benefit of \$17,000 for every family served.<sup>35</sup>

## EARLY CARE AND EDUCATION PROGRAMS IN ILLINOIS

Programs and priorities that are important for helping Illinois’ youngest learners include:

- **Preschool** – Years of strong, bipartisan efforts at strengthening voluntary preschool opportunities culminated in the overwhelming approval of Illinois’ landmark “Preschool for All” legislation in 2006. It set a statutory goal for improving program access and quality over time, as resources allow, and always prioritizing services for at-risk children. Illinois became a national leader in these efforts, and particularly in extending services to 3- as well as 4-year-old children. PreK enrollment peaked at about 95,000 in 2009, before several years of deep budget cuts greatly

set back progress and pushed more than 20,000 youngsters from classrooms across the state.

These cuts also took vital, birth-to-3 services from thousands of at-risk infants and toddlers, whose programs are funded through a portion of the Early Childhood Block Grant that supports Illinois preschool efforts. After years of neglect, Illinois should return to the Preschool for All plans of gradually extending early learning supports to the tens of thousands of young children whose parents still seek such help. Plus, Illinois’ approval for new federal preK grant assistance represents a critical opportunity to boost these efforts, targeting intensive services to thousands of youngsters who struggle the most and could benefit most.

- **“Parent-coaching” programs** – These voluntary efforts are also known as “home-visiting” programs and have several names, including Healthy Families, Parents Too Soon, and Nurse-Family Partnership. They focus particular help on new, at-risk parents of children

**“Our economy and communities benefit in many important ways from investing in young children’s care and learning, studies show: better graduation rates and job prospects, lower crime, and a reduction in costly, remedial education. A proactive approach to this today will benefit us for years to come, and begin to close the gap between workforce needs and skilled job candidates.”**



– Matt Duffy, Executive Director,  
DeKalb Chamber of Commerce

from birth to age 3. Through these programs, trained professionals regularly visit with interested parents to help them understand how best to nurture their youngsters' nutrition, learning, and healthy development. After all, as many of these parents note, babies don't come with instructional manuals.

Despite research showing multiple benefits, in Illinois available resources limit these services to reaching fewer than one out of 10 eligible children. These invaluable, two-generation services should be extended to more of the new parents who seek assistance in fostering their young children's optimum development.

- **Child care** – In Illinois, about 100,000 low-income, working families receive state assistance in securing reliable, affordable child care for youngsters while their parents are on the job or in school. This represents critical help for households that work hard yet cannot cover the full cost of child care on their own, considering such bills often run as high as college tuition. Participating families are charged sliding-scale co-pay fees and receive childcare subsidies that help not only working parents, but their employers. Studies show parents dealing with child care challenges often take an average of five to nine days off work annually; the resulting costs to American employers top \$3 billion a year in lost productivity, rehiring and retraining.<sup>36</sup> Child care stability reinforces workplace stability and productivity.

Child care also represents an important piece of the early learning puzzle, as high-quality programs support young children's educational development. Illinois' ExceleRate initiative helps to incent child care providers' efforts at improving quality in such areas as learning environment and staff training. Plus in Illinois, child care providers who demonstrate quality can qualify for Early Childhood Block Grant resources to strengthen teaching quality and other program priorities even further. Many working parents use a half-day of preschool and a half-day of child care for a full day of educational services for their children, so parents can work.

## HIGH-QUALITY INNOVATIVE EFFORTS AT THE MIDDLE AND HIGH SCHOOL LEVEL

Business leaders know that young people entering college and the workforce need a mastery of core academic subjects. But they need more:

- The critical thinking and problem-solving skills necessary to find answers to challenges that – unlike multiple choice tests – are not necessarily on the page in front of them.
- Help in “learning how to learn” – knowing how to find out what they do not already know.
- Effective written and verbal communication skills to work as part of a team, or to interact with the public.
- Collaboration skills, such as interpreting others' messages and responding appropriately.

These are skills that can be taught and reinforced, especially in the workforce. All of this goes beyond “textbook” learning to provide students and workers with the skills now needed in a competitive global market.<sup>37</sup>

This deeper learning approach is being implemented around the nation, including through innovative education models at the K-12 level. Many of these programs spark teenagers' imaginations, provide opportunities to attain credentials, and help give their education greater, real-life relevance by demonstrating practical connections between what they learn in



the classroom and what they might do on the job, later in life – often through real-world, work-based learning experiences supported by industry and community partners.

“Career academies” demonstrate a proven approach found throughout the United States and in Illinois that incorporate real-world, work-based learning. Although some programs are stand-alone schools, most are pathways within larger comprehensive high schools. Often called a “school within a school,” pathways typically comprise no more than 200 students who stay together with the same teachers for the duration of the program. That continuity helps create close relationships among the students and with their teachers. It can create the kind of “team player” mentality employers too often find lacking in their younger employees.<sup>38</sup>

In a well-designed study of career academies across America, students were twice as likely as nonparticipants to be working in the computer, engineering, and media technology sector eight years after graduation, thus helping to increase the supply of STEM workers.<sup>39</sup> Young people who went through career academies earned more and were more productive than those not in the program.<sup>40</sup>

## INNOVATIVE MIDDLE AND HIGH SCHOOL PROGRAMS IN ILLINOIS

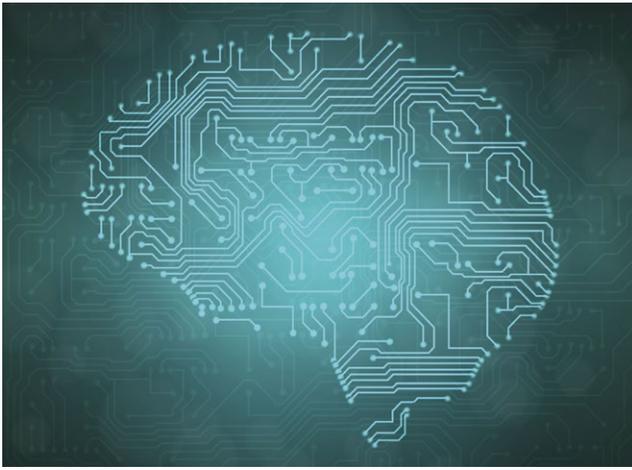
These K-12 programs and priorities help to better-prepare students for not only careers, but for whatever college or training programs they might want to pursue. In Illinois, these efforts include:

- **Career & Technical Education (CTE)** – These programs familiarize students with high-wage, high-skill, and high-demand occupations, as well as the skill sets necessary for success in them. CTE helps support good transitions to postsecondary training programs, employment, or both. Secondary CTE instructional-program content areas range from agriculture to technology and engineering, and nearly half of all Illinois public high school students have participated in them to some



degree. Illinois’ investments in CTE help maintain federal support for them, as well.

- **STEM learning efforts** – In Illinois, the STEM Career Pathways system benefits from public and private leadership, alike. These efforts connect a range of education, training, and other support strategies to help high school students secure credentials that are relevant to employment in a number of business sectors. Public investments help leverage matching, private-sector resources, and integrate academic disciplines with real-world applications of knowledge in such industry sectors as finance, manufacturing, and health science. As some federal dollars for these efforts phase-out, it’s important that we commit state funding to them and entice further private investments.
- **Innovative high school models** – Many Illinois high schools have adopted models that take a “deeper learning” approach. In “learning to learn,” participating students develop the capacity for drawing-on the knowledge they’ve acquired in one subject and applying it in different settings. These models augment core academic curricula with project-based learning, written- and oral-communication activities, and work-based learning opportunities, providing students with hands-on experience and – often – connections with local employers.



## CONCLUSION

Illinois runs the risk of falling behind when it comes to preparing the future workforce to compete successfully in a global economy. Recognizing this risk, the state must take several steps to address the skills gap, and continue on that course. To meet the future demands of a more skilled and educated workforce, policymakers should continue to invest in what really works and support promising and evidence-based approaches that will ensure young people enter the workforce with the skills Illinois businesses need. State policymakers should return to pursuing their statutory, long-term plans for improving the quality of – and children’s access to – preschool and birth-to-3 programs. Illinois should fully support child care for working families, and invest further in the “parent-coaching” efforts that help new, at-risk parents of infants and toddlers to foster their youngsters’ healthiest possible development. In addition, such programs as Career & Technical Education and STEM learning merit greater support to ensure students exit high school better-prepared for promising careers, as well as whatever postsecondary education and training they might pursue. If we are serious about securing Illinois’ economic future, we must act now to provide our businesses with the highly-skilled workforce needed to innovate and grow in the increasingly global marketplace.

## ENDNOTES

- 1 The Nation's Report Card (2013). NAEP state profiles. Retrieved from: <http://nces.ed.gov/nationsreportcard/states/>
- 2 U.S. Department of Education (2015, January). Public high school four-year adjusted cohort graduation rate (ACGR) for the United States, the 50 states and the District of Columbia: School years 2010–11 to 2012–13. National Center for Education Statistics, Institute of Education Sciences. Retrieved from: [http://nces.ed.gov/ccd/tables/ACGR\\_2010-11\\_to\\_2012-13.asp](http://nces.ed.gov/ccd/tables/ACGR_2010-11_to_2012-13.asp)
- 3 IL Report Card 2013-2014. Retrieved from: <http://www.illinoisreportcard.com/State.aspx?source=Trends&source2=ReadyforCollegeCourseWork&Stateid=IL>
- 4 ACT (2014). The condition of college and career readiness 2014 Illinois. Retrieved from: <http://www.act.org/newsroom/data/2014/states/pdf/Illinois.pdf>
- 5 American Management Association. (2010). AMA 2010 critical skills survey. Executive Summary. Retrieved from: <http://www.p21.org/documents/Critical%20Skills%20Survey%20Executive%20Summary.pdf>
- 6 American Management Association. (2010). AMA 2010 critical skills survey. Executive Summary. Retrieved from: <http://www.p21.org/documents/Critical%20Skills%20Survey%20Executive%20Summary.pdf>
- 7 Carnevale, A.P., Smith, N. & Strohl, J. (June 2013). RECOVERY Job growth and education requirements through 2020. Washington, DC: Georgetown University Center on Education and the Workforce. Retrieved from: <https://georgetown.app.box.com/s/kg8r28e48gsaw8ypplxp>
- 8 Carnevale, A.P., Smith, N. & Strohl, J. (June 2013). RECOVERY Job growth and education requirements through 2020. Washington, DC: Georgetown University Center on Education and the Workforce. Retrieved from: <https://georgetown.app.box.com/s/kg8r28e48gsaw8ypplxp>
- 9 Carnevale, A.P., Smith, N. & Strohl, J. (June 2013). RECOVERY Job growth and education requirements through 2020. Washington, DC: Georgetown University Center on Education and the Workforce. Retrieved from: <https://georgetown.app.box.com/s/kg8r28e48gsaw8ypplxp>
- 10 For population age 25 or older. American Community Survey 2012, S1501, Educational Attainment. One year estimates. Retrieved from: <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>
- 11 National Skills Coalition (2014). Illinois' forgotten middle. Retrieved from: <http://www.nationalskillscoalition.org/resources/publications/file/middle-skill-fact-sheets-2014/NSC-Illinois-MiddleSkillFS-2014.pdf>
- 12 Carnevale, A.P., Smith, N. & Strohl, J. (June 2013). RECOVERY Job growth and education requirements through 2020. Washington, DC: Georgetown University Center on Education and the Workforce. Retrieved from: <https://georgetown.app.box.com/s/kg8r28e48gsaw8ypplxp>; Some workers may have postsecondary vocational training that is sufficient for positions like nursing aide positions, which would not be reflected here. For population age 25 or older. American Community Survey 2012, S1501, Educational Attainment. One year estimates. Retrieved from: <http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>
- 13 Carnevale, A.P., Smith, N. & Strohl, J. (June 2013). RECOVERY Job growth and education requirements through 2020. Washington, DC: Georgetown University Center on Education and the Workforce. Retrieved from: <https://georgetown.app.box.com/s/kg8r28e48gsaw8ypplxp>
- 14 Carnevale, A.P., Smith, N. & Strohl, J. (June 2013). RECOVERY Job growth and education requirements through 2020. Washington, DC: Georgetown University Center on Education and the Workforce. Retrieved from: <https://georgetown.app.box.com/s/kg8r28e48gsaw8ypplxp>
- 15 Carnevale, A.P., Smith, N. & Strohl, J. (June 2013). RECOVERY Job growth and education requirements through 2020. Washington, DC: Georgetown University Center on Education and the Workforce. Retrieved from: <https://georgetown.app.box.com/s/kg8r28e48gsaw8ypplxp>
- 16 State of Illinois Department of Employment Security (n. d.). Learn more earn more Illinois high-demand, high-wage occupations. Retrieved from: <http://www.ides.illinois.gov/IDES%20Forms%20and%20Publications/LearnMoreEarnMore-en.pdf>
- 17 State of Illinois Department of Employment Security (n. d.). Learn more earn more Illinois high-demand, high-wage occupations. Retrieved from: <http://www.ides.illinois.gov/>

IDES%20Forms%20and%20Publications/  
LearnMoreEarnMore-en.pdf

**18** Alliance for Excellent Education. (2013, October). The economic benefits of increasing the high school graduation rate for public school students in Illinois. Washington, DC: Author. Retrieved from: [http://all4ed.org/wp-content/uploads/2014/01/Illinois\\_econ.pdf](http://all4ed.org/wp-content/uploads/2014/01/Illinois_econ.pdf)

**19** Complete College America (2014). Game changer state data Illinois. Retrieved from: <http://completecollege.org/state-data-loader/?state=Illinois>

**20** Alliance for Excellent Education. (May 2011). Saving now and saving later: How high school reform can reduce the nation's wasted remediation dollars. Washington, DC: Author. Retrieved from: <http://www.all4ed.org/files/SavingNowSavingLaterRemediation.pdf>

**21** Olds, D.L. (1998). Long-term effects of nurse home visitation on children's criminal and anti-social behavior: 15-year follow-up of a randomized controlled trial. *Journal of the American Medical Association*, 280(14), 1238-1244; Reynolds, A. J., Temple, J. A., Ou, S., Robertson, D. L., Mersky, J. P., Topitzes, J. W., & Niles, M. D. (2007). Effects of a school-based, early childhood intervention on adult health and well-being: A 19-year follow-up of low-income families. *Archives of Pediatrics & Adolescent Medicine*, 161(8), pp. 730-739.

**22** The program in Cincinnati is called Every Child Succeeds (ECS). Donovan, E.F., Ammerman, R.T., Besl, J., Atherton, H., Khoury, J.C., Altate, M., et al. (2007). Intensive home visiting associated with decreased risk of infant death. *Pediatrics*, 119, 1145-1151; Nurse-Family Partnership. (2012). Proven results. Denver, CO: Author. Retrieved from: <http://pediatrics.aappublications.org/content/119/6/1145.full>

**23** Fitzgibbon, M. L., Stolley, M. R., Schiffer, L., Van Horn, L., Kaufer Christoffel, K., & Dyer, A. (2005). Two-year follow-up results for Hip-Hop to Health Jr.: A randomized controlled trial for overweight prevention in preschool minority children. *Journal of Pediatrics*, 146 (5), 618-625.

**24** Barnett, W. S., Jung, K., Youn, M., & Frede, E. C. (2013, March 20). Abbott Preschool Program longitudinal effects study: Fifth grade follow-up. New Brunswick, NJ: National Institute for Early Education Research, Rutgers-The State University of New Jersey. Retrieved from: <http://nieer.org/sites/nieer/files/APPLES%205th%20Grade.pdf>

**25** Coalition for Evidence-Based Policy (2011, August). HHS's Maternal, Infant, and Early Childhood Home Visiting Program: Which Program Models Identified by HHS

As "Evidence-Based" Are Most Likely To Produce Important Improvements in the Lives of Children and Parents? Retrieved from: <http://coalition4evidence.org/wp-content/uploads/2011/08/Review-of-8-hv-models-Aug-2011-FINAL.pdf>

**26** Campbell, S.B., Shaw, D.S. & Gilliom, M. (2000). Early externalizing behavior problems: Toddlers and preschoolers at-risk for later maladjustment. *Development and Psychopathology*, 12, 467-488.

**27** Further studies are needed to confirm these findings, as these outcomes could have appeared by chance due to the large number of outcomes measured in the study: DuMont, K., Kirkland, K., MitchellHerzfeld, S., Ehrhard-Dietzel, S., Rodriguez, M. L., Lee, E., Layne, C., & Greene, R. (2010). A randomized trial of Healthy Families New York (HFNY): Does home visiting prevent child maltreatment? Rensselaer, NY: New York State Office of Children & Family Services and Albany, NY: The University of Albany, State University of New York.

**28** Lipsey, M. W., Hofer, K. G., Dong, N., Farran, D. C., & Bilbrey, C. (2013). Evaluation of the Tennessee Voluntary Prekindergarten Program: Kindergarten and first grade follow-up results from the randomized control design (Research report). Nashville, TN: Vanderbilt University, Peabody Research Institute. Retrieved from: [http://peabody.vanderbilt.edu/research/pri/projects/by\\_content\\_area/tennessee\\_state\\_pre-k\\_evaluation/TN\\_VPK\\_Evaluation\\_Research\\_Report2\\_\\_Appendices\\_August\\_2013.pdf](http://peabody.vanderbilt.edu/research/pri/projects/by_content_area/tennessee_state_pre-k_evaluation/TN_VPK_Evaluation_Research_Report2__Appendices_August_2013.pdf)

**29** Reynolds, A. J., Temple, J. A., Robertson, D. L., & Mann, E. A. (2001, May 9). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest A 15-year follow-up of low-income children in public schools. *Journal of the American Medical Association*, 285, 2339-2346; Michigan Great Start Readiness Program evaluation 2012: High school graduation and grade retention findings. Retrieved from <http://bridgemi.com/wp-content/uploads/2012/06/GSRP-evaluation-may-21-12.pdf>

**30** Barnett, W.S., & Masse, L.N. (2007). Comparative benefit-cost analysis of the Abecedarian program and its policy implications. *Economics of Education Review*, 26, 113 – 125.

**31** Reynolds, A. J., Temple, J. A., Robertson, D. L., & Mann, E. A. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest. *Journal of the American Medical Association*, 285, 2339- 2380; Schweinhart, L. J., Barnes, H. V., & Weikart, D. P. (1993). Significant benefits: The High/Scope

- Perry Preschool study through age 27. Ypsilanti, MI: High/Scope Press.
- 32** Eckenrode, J., Campa, M., Luckey, D.W., Henderson, C.R., Cole, R., et al. (2010). Long-term effects of prenatal and infancy nurse home visitation on the life course of youths: 19-year follow-up of a randomized trial. *Archives of Pediatrics and Adolescent Medicine*, 164(1), 9-15
- 33** Barnett, W.S., & Masse, L.N. (2007). Comparative benefit-cost analysis of the Abecedarian program and its policy implications. *Economics of Education Review*, 26, 113 – 125.
- 34** Washington State Institute for Public Policy (2014, August). Benefit-cost summary State and district early education programs. Olympia, WA: Author. Retrieved from: <http://www.wsipp.wa.gov/BenefitCost/Program/270>
- 35** Washington State Institute for Public Policy (2013, October). Benefit-Cost Results: Child Welfare. Retrieved on February 24, 2014 from: [http://www.wsipp.wa.gov/BenefitCost/Pdf/3/WSIPP\\_BenefitCost\\_Child-Welfare](http://www.wsipp.wa.gov/BenefitCost/Pdf/3/WSIPP_BenefitCost_Child-Welfare)
- 36** Shellenback, K. (2004). Child care and parent productivity: Making the business case. Linking Economic Development & Child Care Research Project. Ithaca, NY: Cornell University, Cornell Cooperative Extension. Retrieved from: <http://government.cce.cornell.edu/doc/pdf/ChildCareParentProductivity.pdf>
- 37** This paragraph explaining deeper learning is drawn from a national brief: National Research Council. (2012). Education for life and work: Developing transferrable knowledge and skills in the 21st century. [Report brief]. Washington DC: The National Academies Press.
- 38** ConnectEd. (nd). Linked Learning: frequently asked questions. Retrieved from: [http://www.connectedcalifornia.org/downloads/LL\\_Frequently\\_Asked\\_Questions\\_web.pdf](http://www.connectedcalifornia.org/downloads/LL_Frequently_Asked_Questions_web.pdf); Stam, B. (Jan / Feb 2011). The power of real-world application: industry-themed pathways that connect learning with students' interests and career aspirations can transform the high school experience. *Leadership*, pp. 12-15. Retrieved from: <http://www.connectedcalifornia.org/downloads/LeadershipMagLinkedLearning.pdf>
- 39** Kemple, J. J., & Willner, C.J. (July 2008). Technical resources for Career Academies: Long-term impacts on labor market outcomes, educational attainment, and transitions to adulthood. MDRC. Retrieved from: <http://www.mdrc.org/publications/482/techresources.pdf>
- 40** Kemple, J.J., & Willner, C.J. (2008). Career Academies: Long-term impacts on labor market outcomes, educational attainment, and transitions to adulthood. New York: MDRC.



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